

A NEW *TRYPETISOMA* FROM MEXICO (DIPTERA: LAUXANIIDAE)

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Abstract.—*Trypetisoma zacatecasense*, new species, related to the Californian *T. eutretoides* Arnaud, is described from 50 km southeast of Guadalupe, Zacatecas, Mexico.

The American species of the genus *Trypetisoma* Malloch (in Malloch and McAtee, 1924: 25) were revised by Arnaud in 1968. Three Nearctic and Neotropical species were included. The genus *Trypetisoma* is now recog-



Fig. 1. *Trypetisoma zacatecasense*, holotype male, left wing, dorsal view.

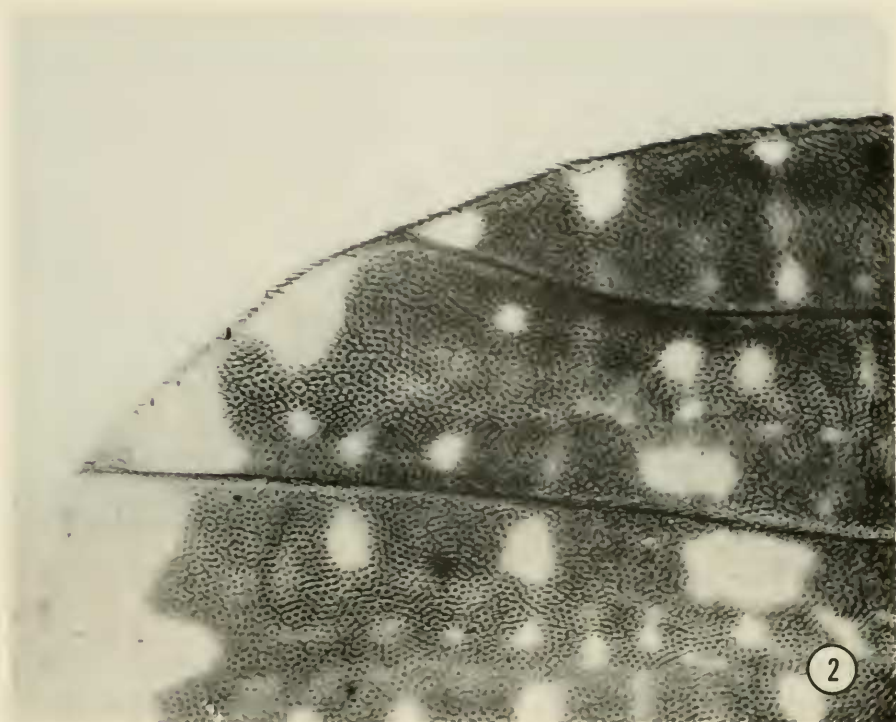


Fig. 2. *Trypetisoma zacatecasense*, holotype male, apical part of left wing, dorsal view, showing terminal sections of 2nd and 3rd veins and distribution of costal spinules.

nized to have an extensive world distribution. Stuckenberg (1971: 517–522) has shown the genus *Trypaneoides* Tonnoir and Malloch (1926: 20), with the type-species *guttata* Tonnoir and Malloch from New Zealand and with species known from the Australian, Oriental, Afrotropical and Madagascan realms, to be a synonym of *Trypetisoma*. He was reluctant to synonymize them and commented "I maintain them as distinct genera only because *Trypetisoma* has priority and in synonymy would replace *Trypaneoides*, a name much used and attached to many Old World species." Species of the American trypetisomas were shown by Stuckenberg to remarkably have both sapromyziform (costa with spinules diminishing in size and then stopping between the ends of the second and third veins, not reaching the apex of R_{4+5}) and homoneuriform (costa with spinules reaching or very nearly reaching the apex of R_{4+5} where they stop abruptly without marked prior diminution in size) wings among its taxa. This is a character otherwise used to divide the family Lauxaniidae into two major sections. The new species here described has the sapromyziform wing condition (Fig. 2).



Fig. 3. *Trypetisoma zacatecasense*, holotype male, left wing, dorsal view. Photograph taken on Plus X film with dark-field illumination by Stennett S. Heaton.

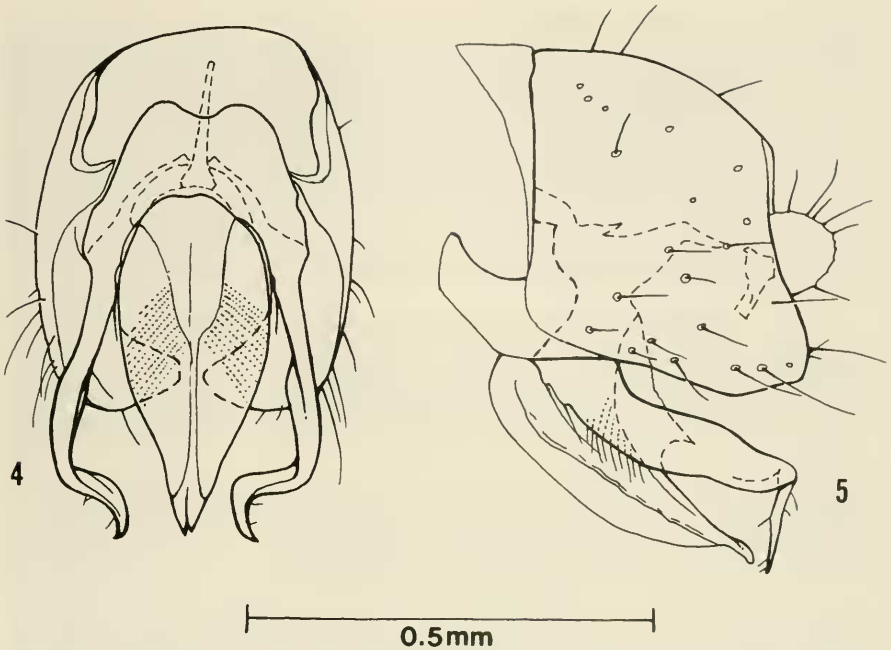
Trypetisoma zacatecasense Arnaud and Gelhaus, NEW SPECIES
Figs. 1-5

Type.—Holotype ♂, labeled "Mex. Zac. 31 mi./SE. Guadalupe [Times Atlas reads Guadalupe]/7200' VI-30-1971" "On *Prosopis/laevigata* L&C/O'Brien, Marshall" "Texas Tech U./Mesquite Project," property of the U.S. National Museum of Natural History, Washington, D.C., USNM type no. 75653.

Etymology.—The specific name is an adjective derived from the geographical name.

Diagnosis.—A small (body length 2.1 mm, wing length 2.85 mm) dark brown species with broad wings (slightly more than $\frac{1}{2}$ as wide as long) (Figs. 1-3) and with distinctive male postabdomen (Figs. 4, 5).

Description of holotype.—Length about 2.1 mm, wing length 2.85 mm. *Head*: Brown, grey pollinose; parafacial and gena with irregular brown pattern; area about bases of parafrontal and postorbital bristles brown; front at base of antennae about 0.40 of head width; antennae and basal portions of arista yellowish brown, with apical $\frac{2}{3}$ of arista darkened; palpi yellow with brownish tips; mouth parts yellow; ocellar triangle mostly grey, with grey band behind. *Thorax*: Brown with grey pollinose pattern; pair of longitudinal brown vittae between acrostichals and dorsocentrals that coalesce posteriorly into a broad transverse band; scutellum with irregular brown median



Figs. 4, 5. *Trypetisoma zacatecasense*, holotype male, postabdomen. 4, Ventral view. 5, Lateral view.

bands and brown bases about scutellar bristles; mediotergite below post-scutellum with broad brown bands; 4 (left) and 5 (right) acrostichal bristles and 4 pairs of strong dorsocentral bristles; 1 stout humeral bristle; 2 stout notopleural bristles; inner marginal scutellars convergent and long. *Legs*: Yellowish; femora with 2 posterior broad transverse dark brown bands; hind tibiae basally with narrower brown transverse bands; tarsi tan and claws black. *Wing* (Figs. 1–3): Length 2.85 mm and width 1.4 mm; membrane and veins dark brown with white maculations; apex mostly white. Wing with sapromyziform costa with spinules diminishing in size and stopping between ends of 2nd and 3rd veins, not reaching apex of R_{4+5} . *Halter*: With yellow stalk and dark brown knob. *Abdomen*: Dark brown, with extensive grey pollinose pattern forming irregular patches; tergum 3 with large patches on more than apical $\frac{1}{2}$ and smaller irregular patches on basal $\frac{1}{2}$. *Postabdomen* (Figs. 4, 5): As illustrated, with structures which George C. Steyskal (in discussion) presumes are processes of hypandrium, in ventral view being progressively divergent for most of their length and inwardly angulate before their apices.

Comparison.—*Trypetisoma zacatecasense* may be compared with *T. eutretoides*. Both have very broad wings with sapromyziform costas. In *za-*

catecasense the wing is slightly more than half as wide as long (44:86 units) while in *eutretoides* the wing is broader (49:88 units). Also, in the former there is a small black maculation on the r-m crossvein. The third abdominal tergum of *zacatecasense* has broad irregular pollinose patches on more than the apical half and smaller patches on the basal half, while in *eutretoides* these, in both areas, are smaller and more rounded. In *zacatecasense* the processes of the hypandrium, in ventral view, are divergent for most of their length and angulate before their apices, while in *eutretoides* they are parallel sided on their inner basal halves and sigmoid on their apical halves.

CHECKLIST OF *TRYPETISOMA* OF THE NEW WORLD

eutretoides Arnaud, 1968: 111; U.S.A. (California).
shewelli Arnaud, 1968: 113; Brazil (Santa Catarina).
sticticum (Loew) (as *Sapromyza*), 1863: 30; U.S.A. (District of Columbia, North Carolina, Texas).
zacatecasense Arnaud and Gelhaus, new species; Mexico (Zacatecas).
 new species (1), Stuckenberg, 1971: 522; Paraguay.
 new species (2), Stuckenberg, 1971: 522; Paraguay.

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